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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,000

01/06/2006

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CU-4426 RJS

1406

26530 7590 07/06/2009  
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EXAMINER

PICKARD, ALISON K

ART UNIT

PAPER NUMBER

3676

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,000	<b>Applicant(s)</b> SUZUKI ET AL.	
	<b>Examiner</b> Alison K. Pickard	<b>Art Unit</b> 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4-6-09.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuyama in view of Takizawa in view of Goldstein (5,542,682).

Masuyama discloses an oil ring comprising an I-shape with two rails and a column. A coil expander 22 is in an inner peripheral groove and made of shape memory alloy. The expander expands at a higher temperature. Masuyama does not disclose the width of the ring. Takizawa teaches an oil ring with a coil expander. The ring has a width of 1.2 to 2mm which is within the claimed range. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the width in that range as such is a known dimension yielding expected results.

Masuyama discloses that the shape and size of the coil expander can be selected to provide the desired tension requirements and can be selected from known shapes, etc. (see col. 6, lines 37-49). However, Masuyama does not specifically disclose that the spring has a rectangular cross-section with a thickness/width ratio as claimed. Goldstein teaches equivalent coil spring cross-sections including a rectangular shape (see Fig. 6, 50d). Goldstein does not appear to disclose the claimed ratio though. It is not considered inventive to discover the optimum or workable ranges by routine experimentation absent some showing of criticality. See

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In re Aller, 105 USPQ 233, 235 (CCPA 1955). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a spring with a rectangular shape and a ratio in the claimed range as such shape is a known equivalent and Masuyama has indicated that one of skill can modify the shape to achieve a desired tension.

### ***Response to Arguments***

3. Applicant's arguments filed 4-6-09 have been fully considered but they are not persuasive.

Applicant argues that there are unexpected results related to the width of the oil ring. Takizawa teaches a known oil ring having the claimed width. Therefore, these arguments are unpersuasive. Applicant also argues that the results are due to the claimed ratio of the wire's thickness and width. However, the sections of the specification noted in the arguments do not seem to state that the results are specifically due to the claimed ratio. The specification does state that the ratio can even be 1:1. Goldstein teaches the wire can be either square (which would have a ratio of 1:1) or rectangular in cross-section. Given the suggestion by Masuyama that the coil expander can be modified in shape and size to control tension, and the disclosure that the ratio can be 1:1, it is considered obvious to discover the range of 1:2 to 1:3.5 required by the claims. The square shape of Goldstein would at least be close enough to the range to be considered obvious (see Titanium Metals Corp. of America v. Banner 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)).

Applicant also argues there is no motivation to use the shapes of Goldstein. KSR forecloses the argument that a specific teaching, suggestion, or motivation is required to support

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a finding of obviousness. See KSR, 82 USPQ2d at 1396. Goldstein teaches known, equivalent shapes/elements. Substitution of these would yield expected results.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062. The examiner can normally be reached on M-F (9-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alison K. Pickard/  
Primary Examiner, Art Unit 3676

AP